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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/808,275 | 03/25/2004 | Philippe Fessou | 251091US41 | 5085 |
| 22850 | 7590 | 09/09/2005 | EXAMINER | |
| OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | HANAN, DEVIN J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3745 | |

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

(2)

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/808,275 | Applicant(s) FESSOU ET AL. | |
| | Examiner Devin Hanan | Art Unit 3745 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>3/25/2004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Decker et al. (U.S. Patent 6,554,569).

Decker et al. discloses a nozzle vane (abstract) for a rotary disk of a turbomachine, the vane presenting mutually orthogonal longitudinal (along turbine axis of rotation, 12), tangential (circumferentially around axis of rotation), and radial axes (radially out from axis of rotation), and having pressure side and suction side (col. 4 line 36) surfaces extending radially between a base (32) and a tip (31), and longitudinally between a leading edge and a trailing edge, and a plurality of vane sections having centers of gravity in alignment along a stacking axis, said vane presenting a lower portion, an intermediate portion, and an upper portion, said lower portion extending radially between the base of the vane and a lower limit of the intermediate portion, and said upper portion extending radially between an upper limit of the intermediate portion and the tip of the vane, wherein the stacking axis presents, in the lower and upper portions, a tangential component that is substantially radial (upper and lower portions are substantially radial), and in the intermediate portion, a tangential component having

two slopes (figures 6 and 7 show two slopes in the intermediate section,, resulting bend is 78).

Regarding claim 2, Decker et al. discloses all of the above claims elements from claim 1 and a tangential component of the stacking axis, in said intermediate portion, comprises a first slope in the direction opposite to the direction of rotation of the disk, and a second slope in the direction of rotation of said disk (figures 6 and 7 show two slopes in the intermediate section).

Regarding claim 3, Decker et al. discloses all of the above claims elements from claim 2 and a first slope presents an angle of inclination with respect to the radial direction lying in the range 5 degrees to 45 degrees (first slope lies in the range and is angled on opposite side of tangential axis when compared to the second slope).

Regarding claim 4, Decker et al. discloses all of the above claims elements from claim 2 and a second slope presents an angle of inclination with respect to the radial direction lying in the range 5 degrees to 45 degrees (second slope lies in the range and is angled on opposite side of tangential axis when compared to the first slope).

Regarding claim 5, Decker et al. discloses all of the above claims elements from claim 2 and a first slope that extends radially between the lower limit of the intermediate portion and a bend point (78) situated between the lower and upper limits of said intermediate portion, and said second slope extends radially between said bend point (78) and said upper limit.

Regarding claim 6, Decker et al. discloses all of the above claims elements from claim 5 and the tangential component of the stacking axis of the intermediate portion

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occupies a radial height lying in the range 35% to 65% of a total radial height between the base and the tip of said vane (sloped portions cover the range).

Regarding claim 7, Decker et al. discloses all of the above claims elements from claim 1 and the tangential component of the stacking axis of the lower portion occupies a radial height lying in the range 10% to 25% of a total radial height between the base and the tip of said vane (substantially radial portion extends approximately 10 percent of the height at the lower portion next to base 32).

Regarding claim 8, Decker et al. discloses all of the above claims elements from claim 1 and a tangential component of the stacking axis of the upper portion occupies a radial height lying in the range 10% to 25% of a total radial height between the base and the tip of said vane (substantially radial portion extends approximately 10 percent of the height of the upper portion next to tip 31).

Prior Art

The patent to Wood et al. (U.S. Patent 6,312,219) is cited for its teaching of another curved nozzle vane, the curve coming from the narrowing of the waist (figure 4).

The patent to Wadia et al. (U.S. Patent 6,195,983) is cited for its teaching of another curved nozzle vane with radial upper and lower portions, although there is only one tangential slope in the intermediate portion (figure 4).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devin Hanan whose telephone number is 571-272-6089. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on 571-272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Devin Hanan
Patent Examiner
Art Unit 745


EDWARD K. LOOK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700
9/6/08